WHAT IS CLAIMED IS:

1. Process for the manufacturing of a coating (2) for an impression cylinder, comprising the steps of: inserting a hollow cylinder (5) in between a carrier (1) and a cylinder shape (10) in a fixture (4); inserting material in order to form the coating (2) in the space between the carrier (1) and the hollow cylinder (5) (an internal field (8)), and between the hollow cylinder (5) and the cylinder shape (10) (an external field (7)); and removing the hollow cylinder (5) from the carrier (1) and from the cylinder shape (10) at a pre-determined velocity.

2. Process according to Claim 1, wherein the hollow cylinder (5) is removed from the carrier (1) and from the cylinder shape (10) at a constant velocity.

3. Process according to Claim 1, wherein the hollow cylinder (5) is removed from the carrier (1) and the cylinder shape (10) at an accelerating rate.

4. Process according to Claim 1, wherein fluid or viscous material is fed between the carrier (1) and the cylinder shape (10) in order to create the coating (2).

5. Process according to Claim 1, wherein a conductive primer layer is mounted onto the carrier (1).

6. Process according to Claim 1, wherein a nickel layer with a density of 125 μm is manufactured as carrier (1) onto which a primer layer and a thermally hardenable polyurethane layer is mounted as a coating (2) with a density of 10 mm.

7. Process according to Claim 1, wherein the material is inserted in the internal field (8) and the external field (7) through valves (3, 3').

8. Process according to Claim 7, wherein the material flow is provided by the initiation of ultrasonic waves.

9. Process according to Claim 1, wherein the fixture (4) is cooled, and the coating (2) is removed from the carrier (1).

10. Process according to Claim 1, wherein the interior surface of the cylinder shape (10) is provided with a separating agent for an improved detachment of the cylinder shape (10) from the coating (2).

11. A fixture (4) for the manufacturing of a coating (2) for an impression cylinder comprising: a carrier (1) and a cylinder shape (10) mounted in said fixture; a hollow cylinder (5) adapted to be inserted in between said carrier (1); and said cylinder shape (10), means for inserting coating material between said carrier (1) and said hollow cylinder (5) and between said hollow cylinder (5) and said cylinder shape (10); and a drive unit (13) to control the velocity of insertion of said hollow cylinder (5) between said carrier (1) and said cylinder shape (10).

12. Fixture (4) according to Claim 11, at least one valve (3, 3') is provided for the injection of material into the spaces between the carrier (1), and said hollow cylinder (5) (the internal field (8)), and between said hollow cylinder (5) and said cylinder shape (10) (the external field (7)).

13. Fixture (4) according to Claim 11, wherein said drive unit (13) controls the velocity of said hollow cylinder (5) at a pre-selected constant velocity.

14. Fixture (4) according to Claim 11 wherein said drive unit (13) controls the velocity of said hollow cylinder (5) at a pre-selected non-constant velocity.

15. Fixture (4) according to Claim 11, further including an ultrasonic generator for the improvement of the material flow.